NEW YORK GATEWAY
CONNECTIONS IMPROVEMENT PROJECT
TO THE US PEACE BRIDGE PLAZA

Draft Design Report/Environmental Impact Statement

Draft Section 4(f) Evaluation (49 USC 303)

APPENDIX I – VISUAL IMPACT ASSESSMENT

PIN 5760.80
City of Buffalo
Erie County, New York

November 15, 2013

U.S. Department of Transportation
Federal Highway Administration

New York State
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1 INTRODUCTION

Parsons was retained by the New York State Department of Transportation (NYSDOT) to prepare a Visual Impact Assessment (VIA) for the proposed gateway connections improvements to the U.S. Peace Bridge Plaza located in the City of Buffalo, New York, four miles east of Fort Erie, Ontario, Canada (refer to Figure 1). Parsons is the lead consultant for the schematic design, final design, and construction support services retained by NYSDOT.

This VIA was prepared under the direct guidance of a registered landscape architect experienced in the preparation of visual impact assessments. It is also consistent with the policies, procedures, and guidelines contained in established visual impact assessment methodologies (refer to Section 1.5).

1.1 PROJECT DESCRIPTION

The proposed project comprises the construction of new ramps to provide direct access from the U.S. Peace Bridge Plaza (Plaza) to northbound I-190, redirect traffic from Front Park, and the removal of Baird Drive. Specifically, the project includes the construction of the following:

- A new ramp (Ramp D), providing direct access from the Plaza to northbound I-190;
- A new ramp (Ramp PN), providing access from Porter Avenue to the existing northbound I-190 exit ramp (Ramp N/ Ramp A) to the Plaza, including a roundabout or signalized intersection at Porter Avenue;
- Removal of Baird Drive, including the conversion of the existing roadbed into additional green space; and,
- Modification to various roads, ramps, signage, and lighting in the vicinity of the Plaza, including the Shoreline Trail along the waterfront.

The proposed improvements will be constructed on the existing land currently occupied by the Plaza and city streets. The project addresses the limited direct access between the Plaza and I-190 by providing new and enhanced direct connections thereby, reducing the volume of regional and international traffic using the local street system.

1.2 PROJECT LOCATION

The NY Gateway Connections project is located in the West Side neighborhood of the City of Buffalo, Erie County, New York (refer to Figure 1). The project area is adjacent to Front Park, which was designed by Frederick Law Olmsted as part of a citywide park and parkway system opened in 1868, and includes a small portion of the park (the existing Baird Drive). Major roadways in the project area include Niagara Thruway (I-190), Porter Avenue, Baird Drive, Busti Avenue, and the I-190 (Niagara Thruway) ramp connections to and from the Plaza (refer to Figure 2).

Regional Map

Project Location

Figure 1: Project Location Map

Figure 2: General Project Area Map

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1.3 PROJECT PURPOSE AND NEED

The purpose of this project is to reduce the use of the local streets by interstate traffic (autos and trucks) and to provide access to the existing Plaza at its current location.

The primary need of the project is to address the limited direct access between the Plaza and Interstate 190. Existing direct access is limited and requires regional and international traffic to use the local street system. This limited access adds additional commercial traffic to the local streets which were originally designed to only meet the needs of local traffic.

Preliminary analyses indicate that most traffic to and from the Plaza originates from or is destined to I-190. Though it varies by time of day, approximately 20 percent of cars and 10 percent of trucks that are destined to Canada must exit southbound I-190 at Porter Avenue and travel the local streets (Porter Avenue and Baird Drive through Front Park) to the Plaza. Similarly, 18 percent of cars and 6 percent of trucks exiting the Plaza must travel along the local streets (Baird Drive through Front Park and then Porter Avenue) to access northbound I-190. As a result of these conditions, as many as 228 interstate vehicles, including 27 trucks, use Porter Avenue between the interstate highway and Baird Drive during the peak hour, which constitutes approximately 15 percent of all traffic on the local-street segment.

1.4 PROJECT ALTERNATIVES

Based on the project need, purpose, and objectives, the following alternatives have been developed for study. The Build Alternative and Sub-Alternative have been carried forward for evaluation as part of this VIA.

1.4.1 No-Build Alternative

The No-Build Alternative assumes no improvements in the project area other than those planned by others or implemented as part of routine maintenance. Although the No-Build Alternative does not meet the project's purpose and need, NEPA requires that it be evaluated in the EIS. The No-Build Alternative also serves as the baseline condition against which the potential benefits and impacts of the Build Alternative are evaluated.

1.4.2 Build Alternative

The Build Alternative would construct a new on-ramp (Ramp D), providing direct access from the Plaza to northbound I-190. It would also construct a new ramp (Ramp PN) from Porter Avenue to the existing I-190 northbound off-ramp (Ramp N) to the Plaza (refer to Figure 3). The combination of these new ramps will allow removal of Baird Drive and conversion of the existing roadbed into additional Front Park green space. With the removal of Baird Drive, 4.5 acres of green space located between Busti Avenue and Baird Drive would be reconnected to the greater park area. This alternative would require modifications to the Massachusetts Pumping Station access road, the Shoreline Trail bicycle/pedestrian facility along the waterfront, and several existing I-190 ramps in the vicinity of the Plaza, as well as new signing approaching and within the Plaza to clearly direct vehicles to the appropriate ramps and routes. To accommodate the new Ramp PN at Porter Avenue and the existing adjacent I-190 northbound on-ramp (Ramp P), Porter Avenue would be modified to include a roundabout or signalized intersection (refer to Figure 3 and Figure 4). Modifications along Porter Avenue may include removal and replacement of the bridge over the I-190, if needed, to complete the Ramp P intersection improvements.

Figure 3: Proposed Roadway Network with Porter Avenue Roundabout

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Figure 4: Proposed Roadway Network with Porter Avenue Intersection

1.5 METHODOLOGY

The evaluation of existing aesthetic resources in the landscape requires the application of a process that seeks to objectively identify the visual features, or resources, of the landscape; assesses the character and quality of those resources relative to overall regional visual character, and identifies the importance to people, or sensitivity, of views of visual resources in the landscape. With this preliminary establishment of the baseline (existing) conditions, a proposed project or another change to the landscape can be systematically evaluated for its degree of impact. The degree of impact depends on both the magnitude of change in the visual resource (i.e., visual character and quality) and viewers' responses to and concern for those changes. This general process is similar for all established federal procedures for visual assessment (Smardon, et al. 1986) and represents a suitable method for visual assessment for other projects and areas.

Guidelines in FHWA's Visual Impact Assessment for Highway Projects, Publication No. FHWA-HI-88-054 (March 1988) and NYSDEC's Assessing and Mitigating Visual Impacts Policy, Publication No. DEP-00-2 (July 2000) were referenced to organize this study. The manuals provide a methodology to characterize the visual quality of existing resources, analyze the proposed project effect on these resources, and predict the degradation or improvement of this visual quality and the viewers' response (refer to the Glossary for definitions of common terms used).

Generally, the visual impact assessment for the gateway connections followed these steps:

- Define the existing visual resources and landscape units of the study area (refer to Figure 5);
- Identify the project viewer groups and their typical viewpoint locations that are likely to be affected by the proposed project;
- Identify community goals for visual quality;
- Identify the visual quality of viewsheds from project study area landscape units (refer to Figure 10);
- Evaluate whether the proposed project will degrade the visual quality of visual resources viewed by viewer groups. Review design drawings and photo simulations of the proposed project from key view locations to help predict the project's effect;
- Predict viewer response to changes in visual quality; and,
- Propose strategies that may be considered to mitigate adverse effects.

Figure 5: Study Area Map

1.5.1 Methodology Preparation

Before field surveys were conducted, the project landscape architect met with project engineers to discuss the proposed design and the visible changes it may cause to the existing environment. City land use plans were reviewed for community goals or policies concerning visual resources. The City of Buffalo's Comprehensive Plan and Draft Buffalo Green Code provided this information (refer to Section 2.4).

1.5.2 Field Visits

Visibility of the gateway connections were evaluated in the field by car and on foot during daylight hours on August 21st and 23rd, 2013 during summer conditions with full foliage conditions to observe the project setting and identify the existing visual character. Public roads were travelled and vantage points were visited within the study area to document from where the gateway connections can or cannot be seen. Photos were taken from fifty-two viewpoints (refer to Figure 6 and Attachment B). Viewpoints were collected using a global positioning system (GPS) built into the digital camera (Nikon CoolPix S9300) and noted on field maps. The GPS information was later electronically transferred to a DTM to be used in the development of the photo simulations.

1.5.3 Photosimulations

A three-dimensional model (3d Model) and point source photo simulation is used to illustrate proposed conditions on the existing environment. A computer 3d model is created for the design alternative that showed the roadway and plaza improvements along with the proposed buildings. The GPS data for the photos collected during the field visits is then transferred to the 3d Model. Utilizing the GPS data, including the camera's height and angle, and the 3d Model, a three-dimensional rendering (3d Rendering) of the proposed conditions is created. The last step takes the 3d Rendering and merges it with the digital photo illustrating the proposed conditions on the existing landscape.

Figure 6: Existing Photo Locations

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2 VISUAL ENVIRONMENT

Identification of the regional landscape provides a frame of reference for the inventory and evaluation of the visual resources. The regional landscape covers a broad area in which land uses, landform, and natural resources describes an overall visual character that will assist in comparing the visual effects of the project and determine the significance of these effects.

2.1 REGIONAL LANDSCAPE

The New York Gateway Connections Improvement Project (NYGCIP) is situated in Erie County along the eastern shore of the Niaraga River in the City of Buffalo, New York. The following describes the natural environment found within the County and City in which the NYGCIP is located.

2.1.1 Landform

The NYGCIP is south of the Onondaga Formation, which is a group of hard limestones and dolostones of Devonian age that may be characterized by relatively flat uniform topography broken up occassionaly by low-lying ridges. The project site and surrounding city area sits atop a bluff which is uniformly flat overlooking the head of the Niagara River and Lake Erie along the western border. The bluff's western edge slopes downward towards the Black Rock Canal and Niagara River. Man-made landforms, roadway and bridge embankments, are located on the southern and western edges of the NYGCIP. These landforms are utilized for the Peace Bridge, local road and ramp access for the area's transportation network.

Adjacent to the project site atop the bluff sits the historic Front Park, which was a key part of the nation's first park and parkway system designed by Frederick Law Olmsted in 1868. A large play area is located adjacent to Busti Avenue with a formal space, referred to as "the Terrace", located at the edge of the bluff (refer to Figure 7).

Figure 7: Front Park

2.1.2 Vegetation

Minimal vegetation exists within the study area, with the primary concentration within Front Park. The remaining vegetation is scattered within heavily paved transporation corridors and built structures. Front Park's vegetaion consists of mature trees and thick plantations along the bluff to screen the transportation and railroad corridors below (refer to Figure 7). Pockets of vegetaion line the abutments of the Porter Avenue bridge over Interstate 190 in addition to vegetation along the shoreline.

Vegetation within the residential areas is primarily comprised of large mature street trees and landscaped backyards which provide limited views of the NYGCIP. Busti Avenue, along the east side, consists of Linden, Maple and London Planetree, while Porter Avenue, an Olmsted Parkway, consists of a variety of hybrid Elms, which is consistent with the vegetation communities found within Front Park. Front Park includes Spruce, Pine, Oak, Yellow Wood, Maple, Catalpa, Linden, Ash, Honey Locust, Elm, and Tulip Trees.

2.1.3 Land Use

Existing land use in the area can be defined as urban center, urban neighborhood, retail, campus, industrial, open space and transportation corridor as illustrated in Figure 8. Transportation corridor and open space dominate the project area. The urban neighborhood, with its single family detached housing, cover the northeast region of the study area while retail and open space borders along the south. To the west, open space and campus line the shoreline of the Black Rock Canal with the transportation corridor covering a small section of the shoreline. A small section of industrial is to the north, just beyond the Peace Bridge connection to the Plaza.

The City of Buffalo's Draft Green Code identifies this area as part of the City's West Planning Area. Future plans for this area are to maintain the current land uses within the study area.

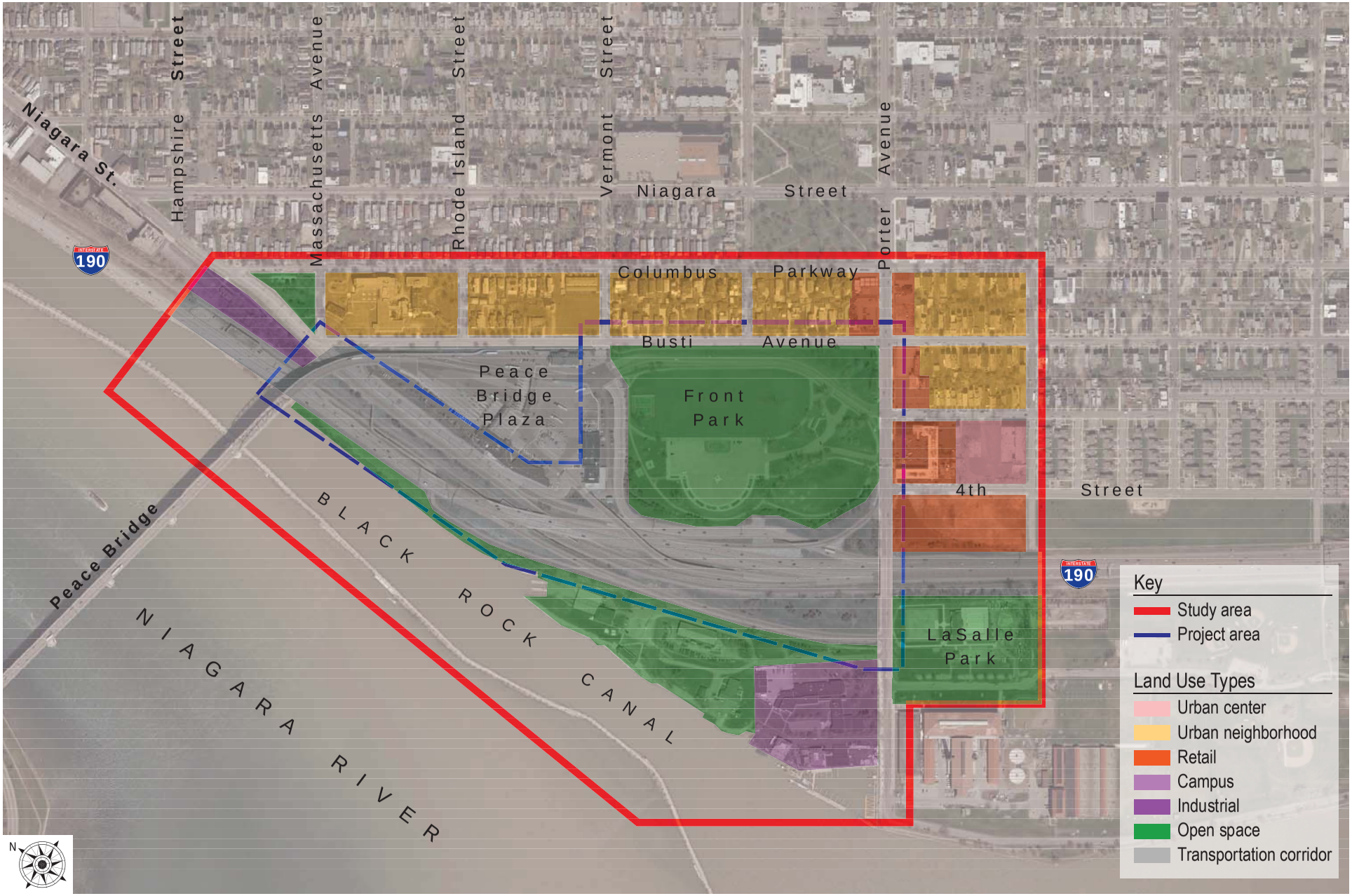

Figure 8: Land Use Map

2.2 LANDSCAPE UNITS

To provide a framework for comparing the visual effects of the project, the regional landscape is divided into distinct landscape units. Based on the following, five distinct landscape units can be defined within the study area (refer to Figure 10).

- Landform: The topographical features of the study area and the uniqueness of the form, pattern and edge identification.
- Vegetation: The type and magnitude of vegetative cover within the study area.
- Color: The elements of visual pattern on the surrounding project element of soil, vegetation and landforms.
- Man-Made Development: The type and magnitude of structures within the study area and the level of contrast with its natural surroundings.

The units' visual character, use and views to the LPOE are described in the following sections.

2.2.1 Urban Residential

Figure 9: Urban Residential Neighborhood

The Urban Residential landscape unit is primarily located along the northeast section of the study area. The single family residences are situated on flat low-lying topography. The streets are laid in a grid pattern with access to the residential blocks from Busti Avenue and various side streets. Residences consist primarily of 1-2 story wood-frame structures with varying architectural styles, minimally set back from the streets. Residential streets are lined with mature trees with front yards consisting of ornamental landscapes within the residential developments providing varying color, texture and patterns. Open views to the NYGCIP are limited to residences along Busti Avenue to the northeast and from the backyards of the residences along Columbus Parkway. Front Park provides a natural buffer for a portion of the residences along Busti Avenue while the Peace Bridge Plaza, including Duty Free, toll plazas and other structures, screen views from the residences to the north of the park.

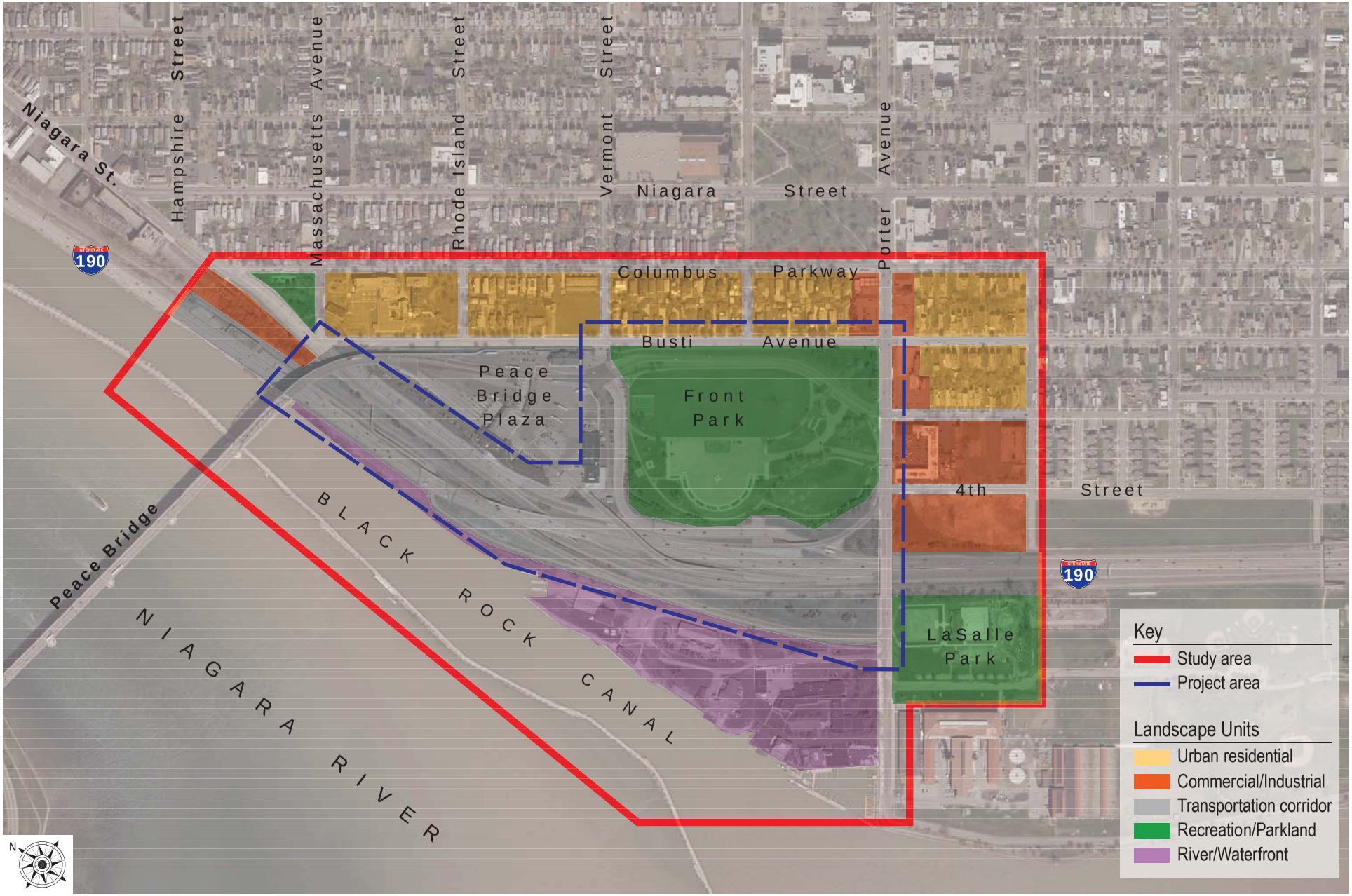

Figure 10: Landscape Units Map

2.2.2 Commercial / Industrial

Figure 11: Commercial Strip Along Porter Avenue

This unit is comprised of a small retail strip along Porter Avenue adjacent to Front Park and a narrow area of industrial facilities to the north. The small retail strip buffers the urban neighborhoods to the south. There are a few small commercial facilities scattered around the NYGCIP, including the Naval and Marine Corps Reserve Center and the City's Colonel Ward Pumping Station in LaSalle Park. Commercial facilities within this unit consist of 1-2 story brick and concrete block structures which exhibit a variety of architectural sytles. The typography is flat low-lying except for the industrial area to the north which sits atop the bluff overlooking the Niagara River and Black Rock Canal. Minimal vegetation, such as street trees, is located adjacent to the structures which provides open unobstructed views of the NYGCIP. Front Park, with its mature trees and thick plantations along the bluff provides the commercial area to the south with a natural buffer of the NYGCIP.

2.2.3 Transportation Corridors

Figure 12: I-190 Transportation Corridor

The Transportation Corridors Unit occurs primarily along the major highway, rail corridor and local roads within the study area. Interstate 190 (I-190) travels north-south through the study area with a single CSX rail line running parallel. Porter Avenue, Busti Avenue and Columbus Parkway serve as the major local roads within the area, which are bisected by numerous city streets, creating a grid pattern. In addition, the ramps and approaches servicing the Peace Bridge Plaza are part of this unit. The highway areas are characterized by level, multi-lanes that include transportation-oriented features such as road signs, guardrails, street lights, walls, abutments, on and off ramps, and bridges. I-190 sits below the bluff with minimal lawn areas providing little color and textures to the landscape unit. Views from the highways are typically focused along the corridor providing little opportunity for casual viewing of the scenery from the motorists. Motorists may experience prolonged open view from I-190 north and south bound lanes as they approach the NYGCIP, but these views are obstructed by the Peace Bridge abutments, ramp abutments and walls, and Porter Avenue bridge. Porter Avenue is a two lane level road, which slopes down towards Lake Erie that includes transportation-oriented features including signalized and non-signalized intersections, street trees, and sidewalks. Vermont Street's axis is oriented to provide motorists unobstructed views between the Plaza and Front Park, along the main approach ramp into the Plaza. The other local roads are characterized by level, single lanes that include similar transit-oriented features. Views from the local roads, including Porter Avenue, Busti Avenue, Vermont Street, and along the various ramps, provide a greater opportunity for casual viewing due to their lower speeds and stops at intersections.

2.2.4 Recreation / Parkland

Figure 13: Front Park

The primary recreation area is Front Park, which is located south of the Peace Bridge Plaza. Located within the park is Baird Drive, which provides access through the park to the Plaza. A large open play field, tennis courts, pathways, and picnic areas are located within the park. Front Park's terrace, a paved parking and viewing area, sits atop the bluff providing views out over the head of the Niagara River, Lake Erie, and the Canadian shoreline in the background. LaSalle Park's splash pad and swimming pool is located to the south while the small Columbus Triangle park is located to the north of the Project Area. Views from LaSalle Park are obstructed by the Porter Avenue bridge while views from Columbus Triangle are obstructed by the approach ramp from the Peace Bridge and the Plaza. The Shoreline Trail (formerly Erie County Riverwalk) travels through the study area north to south crossing over the CSX rail line just south of the Peace Bridge. The Shoreline Trail provides prolonged open views of the NYGCIP, Niagara River, and Lake Erie.

2.2.5 River / Waterfront

Figure 14: Black Rock Canal and the Niagara River

This unit includes the Niagara River, Black Rock Canal, including Bird Island Pier, Lake Erie and the shorelines of these water bodies. The distinguishing characteristec of views from these areas is the dominance of open water in the foreground and middle ground. The water and its visible flow adds interest to the views, especially in many locations where there is a lack of foreground screening, resulting in panoramic views across the water. These views often include the Peace Bridge and I-190 in the foreground and middle ground. Background scenery is variable, ranging from the Buffalo skyline to shoreline parks, such as LaSalle Park.

2.3 VIEWSHEDS

Viewsheds define what can be seen or valued by viewer groups within the landscape units, illustrate the existing and proposed visual environment, and are used to assess the visual impact of the NYGCIP. Eleven viewsheds were selected to represent typical views by the five viewer groups for their effectiveness in depicting the visual impacts of the proposed improvements of the NYGCIP (refer to Figure 15).

Table 1 provides a summary of the viewsheds, along with their associated landscape units, viewer groups, and key visual features. Worksheets summarizing the evaluations of the twelve viewshed evaluations, including their existing and proposed visual quality, are documented in Attachment A.

Table 1: Viewshed Assessment Summary.

View	Viewer Group	Landscape Unit	Key Visual Features
View 1a/1b - Porter Avenue Looking Southwest (Roundabout/ Intersection Options)	Local residents / Travelers/ Communters / Recreational Users	Commercial / Institutional	▪ Porter Avenue dominates the foreground and middleground. ▪ Porter Avenue divides the vegetation along the background and obstructs the view towards Lake Erie.
View 2 - Front Park Looking South	Recreational Users	Recreation / Parkland	▪ The meandering multi-use trail presents an attractive sight in the middle/backgrounds. ▪ Minimal man-made features dot the landscape providing a more naturalized viewshed.
View 3 - Front Park Looking Northwest	Recreational Users	Recreation / Parkland	▪ The natural buffer obstructs the view of the man-made features in the background. ▪ The forms of the hedge and evergreens combine to form a cohesive visual pattern.
View 4 - Front Park Looking East	Recreational Users	Recreation / Parkland	▪ The view is dominated by the Park's terrace pavement in the foreground. ▪ There is a strong visual order with the pavement in the foreground, open lawn in the middleground and the landscaping in the background.
View 5 - Busti Avenue Looking West	Local residents	Urban residential	▪ The view is dominated by Busti Avenue and the park's open lawn area. ▪ The linear forms of the pavement, open lawn and landscaping in the background create a cohesive visual pattern between the man-made and natural features.
View 6 - Vermont Street Looking Southwest	Local residents / Business employees	Urban residential	▪ Street trees frame the view focusing on the plaza's gated entrance. ▪ Utility poles and overhead wires encroach on the residential street image.

Figure 15: Location of Key Views

View	Viewer Group	Landscape Unit	Key Visual Features
View 7 - Shoreline Trail Looking South	Local residents / Business employees / Travelers / Commuters	Transportation corridors	▪ The open view of Lake Erie provides a unique element within the viewshed. ▪ The roadway's pavement and Lake Erie present conflicting landscape character between the man-made and natural elements.
View 8 - Southbound I-190 Looking South	Business employees / Travelers /Commuters	Transportation corridors	▪ The trees and shrubs along the east screen views of the commerical buildings and plaza. ▪ Minimal vegetation degrades the natural setting of the water, creating little harmony between the man-made and natural elements.
View 9 - Shoreline Trail Looking North	Recreational users	River / Waterfront	▪ The vegetation in the foreground and middle ground provides varying texture and color. ▪ The Peace Bridge structure encroaches on the mainly natural landscape.
View 10a/10b - Porter Avenue Looking Northeast (Roundabout/ Intersection Options)	Local residents / Business employees / Travelers / Commuters / Recreational users	Transportation corridors	▪ Porter Avenue and its street trees provide visual continuity from the foreground to the background. ▪ The colors, textures and patterns of the roadside elements unify the man-made elements.
View 11 - D'Youville College Athletic Fields Looking North	Local residents / Recreational users	Transportation corridors	▪ The open lawn in the foreground dominates the view. ▪ Porter Avenue does little to disrupt the visual relationship between the open lawn in the foreground and the wooded area in the background.

2.4 COMMUNITY GOALS FOR VISUAL QUALITY

The sensitivity toward changes in the area's visual resources is evident from the general planning and zoning recommendations established by the City of Buffalo. The following summarizes the City's recommendations for scenic and visual resource preservation.

City of Buffalo's Comprehensive Plan
Maintain and improve waterfront acces along Porter Avenue.
Maintain and improve key neighborhood/waterfront nodes, including Front Park and LaSalle Park.
Apply the principle of sustainable waterfront redevelopment through the City's Local Waterfront Revitalization Program (LWRP) and the Buffalo Watefront Corridor Initiative (WCI) by integrating environmental, social and economic factors.

City of Buffalo's Draft Green Code
Develop strategies for improving the appearance of "first impression" corridors and entry points into the City.
Support efforts to improve traffic flow over the Peace Bridge, while minimizing the impacts on Front Park and surrounding neighborhoods.
Reduce the negative effects of highways on adjacent neighborhoods.
Restore the night sky by basin permissible levels of brightness on the type of place being lit.
Restore naturalized edges on non-working waterfronts.
Minimize impervious surfaces and allow the use of permeable pavement.
Ensure high-quality design of open spaces to promote user comfort, safety, accessibility, and year-round use; enhance the quality of place; and increase value to adjacent properties.
Reestablish lost elements of the Olmsted Park and parkway system, and reserve its borders for the highest grade of development.

City of Buffalo's Local Waterfront Revitalization Program

Provide public visual access to waterfront lands and waters at all sites where practical.

Avoid loss of existing visual access.

- Limit physical blockage of existing visual access by development or activities due to the scale, design, location, or type structures.
- Protect view corridors provided by streets and other public areas leading to the waterfront.
- Protect visual access to open space areas associated with natural resources.

Minimize adverse impacts of new development on visual access.

- Provide for view corridors to the shoreline in those locations where new structures would block views of the waterfront from inland public vantage points, particularly for redevelopment of the inner and outer harbor areas.
- Use structural design and siting/building orientation techniques to preserve or retain visual access and minimize obstruction of views.
- Visual access requirements may be reduced where site conditions, including vegetative cover or natural protective features, block potential views.
- Vegetative or structural screening of an industrial or commercial waterfront site is allowed if the resulting overall visual quality outweighs the loss of visual access.

Provide compensatory mitigation for loss of visual access.

- Provide public visual access from vantage points on the site where development of the site blocks visual access from inland public vantage points.
- Provide for additional and comparable visual access at nearby locations, if physical access cannot be provided on-site.

Increase visual access to the waterfront whenever practical.

- Provide interpretative exhibits at appropriate locations for visual access to enhance public understanding and enjoyment of views of waterfront resources, heritage sites, and prominent water-dependent uses that are an important part of the waterfront landscape.
- Provide and improve visual access to areas of high visual quality including water-dependent uses, natural resources, and panoramas of the Niagara River, Buffalo River, Lake Erie and downtown Buffalo.

City of Buffalo's Local Waterfront Revitalization Program

Protect and improve visual quality throughout the local waterfront revitalization area.

Urban areas and historic waterfront communities. The following activities generally have a visual impact on the waterfront and should be considered with respect to design quality and interest:

- Transportation infrastructure and operations;
- Major structures that are recognized advancements or achievements in architecture or engineering;
- Lighthouses and other navigation aids, piers, and bridges;
- Natural resources, wetlands, concentrations of fish or wildlife; and
- Important open space including vegetated upland areas, expanses of surface water, and shorelines in their natural condition.

Ensure that improvements as a part of the redevelopment of the Peace Bridge Plaza provide opportunities for scenic viewing and improve and enhance the scenic quality of the area.

Design public transportation facilities and infrastructure, including highway on and off ramps and overhead signage (all vertical elements) so as not to interfere with vistas of the waterfront.

Protect the aesthetic quality of locally recognized scenic areas.

Local areas of recognized scenic quality include views of Lake Erie and Niagara River from LaSalle Park and Front Park. Development and land use decisions in these areas should take into consideration the scenic value of these locations and their surrounding resources.

- Efforts should be taken to improve views of the Lake Erie and Niagara River, where practicable, from these areas.
- Redevelopment along the shoreline that is situated adjacent to these areas should not block views of the area(s) or the waterfront.
- Redevelopment along the shoreline that is situated adjacent to these areas should be designed and oriented to enhance scenic vistas and the scenic quality of the surrounding area.
- The greenway system network should be linked to these scenic resources.

2.5 VISUAL QUALITY

To begin to evaluate the visual impact of the proposed project, the visual quality of the existing landscape must be determined. Following the guidelines stated in the Federal Highway Administration's Visual Impact Assessment for Highway Projects, the visual quality of the landscape shall be determined by the following:

- Vividness: The memorable landscape components as they combine in striking and distinctive visual patterns;
- Intactness: The visual integrity of the natural and man-made landscape and the visual freedom from element encroachment; and,
- Unity: The visual coherence and compositional harmony of the landscape considered as a whole, a combination of the natural and man-made elements of the view.

Table 2 shall be used to determine the visual quality.

Table 2: Visual Quality Evaluation Table.

Criteria	High Quality	Moderate/Average Quality	Low Quality
Vividness	▪ Highly memorable. ▪ Elements combine in striking visual patterns. ▪ Presence of distinct focal point(s).	▪ Somewhat memorable. ▪ Elements form perceivable pattern(s).	▪ Not vivid. ▪ Elements appear random with no perceivable pattern(s).
Intactness	▪ Lack of man-made development does not disrupt the natural landscape. ▪ Minimal to no encroachments to the landscape are visible.	▪ Man-made development and the natural landscape are disturbed and encroach on the visual setting.	▪ The landscape has encroaching elements that create an eyesore to viewers.
Unity	▪ Man-made development blends with the natural landscape providing an integrated design with its setting.	▪ Some visual relation between man-made and natural setting.	▪ Man-made and natural patterns do not reinforce each other and visually looks chaotic and jumbled.

These three visual qualities are evaluated independently, and each quality is assigned a rating from 1 to 7, as defined below:

- 0 to 1.5 - Very low
- 1.5 to 2.5 - Low
- 2.5 to 3.5 - Moderately low
- 3.5 to 4.5 - Moderate / Average
- 4.5 to 5.5 - Moderately high
- 5.5 to 6.5 - High
- 6.5 to 7.0 - Very high

The following discussion uses Table 2 for evaluating the visual quality of the eleven key viewsheds.

2.6 VIEW 1 - PORTER AVENUE LOOKING SOUTHWEST

Figure 16: View 1 - Porter Avenue Looking Southwest

Local residents, travelers and recreational users have this view of Porter Avenue as they travel southwest. This viewpoint is located west of the Porter Avenue intersection with Busti Avenue. Porter Avenue rises in the middle/background to cross over I-190. The two lanes in both directions plus the median turning lane dominate the foreground with street trees on the perimeter.

Vividness: The foreground and middleground views are dominated by Porter Avenue, roadside landscaping, and commercial buildings are typical and unmemorable. The background view of Lake Erie is obstructed by the rising Porter Avenue that crosses the I-190. The vividness rating is low.

Intactness: Porter Avenue divides the vegetation along the background. The street trees and maintained lawn along Porter Avenue provides a continuous green strip from foreground to background. The intactness rating is moderately low.

Unity: The street trees and grass strips along Porter Avenue visually link the foreground and background. The continous corridor of Porter Avenue provides supportive colors, textures and materials. The lawn areas are well maintained with little visual clutter from roadside signate and utilities. The unity rating is moderate/average.

Table 3: View 1 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 1 - Porter Avenue Looking Southwest	1.5	3	4	2.8

2.7 VIEW 2 - FRONT PARK LOOKING SOUTH

Recreational users have this view of the NYGCIP from the terrace of Front Park. The park's manicured plant beds and lawn is in the foreground. Mature trees dominate the middle/background providing a natural buffer for the park. A multi-use trail moves through the viewshed. Ramps A and P are slightly visibile through the natural buffer in the middleground.

Vividness: The meandering multi-use trail presents an attractive sight in the middle/backgrounds. The well maintained landscaping and mature trees provide a striking viewshed which makes it memborable. The vividness rating is high.

Figure 17: View 2 - Front Park Looking South

Intactness: The landscaping is intact except for the minor gap off to the right in the middleground. The landscaping is also contextually linked from the foreground to the background by the meandering multi-use trail. Minimal man-made features dot the landscape providing a more naturalized viewshed. The intactness rating is very high.

Unity: The lawn and landscaping are well maintained. The landscape palette of colors, textures and forms provides a harmonious natural viewshed. The absence of man-made features strengthens the natural forms of the landscape. The unity rating is very high.

Table 4: View 2 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 2 - Front Park Looking South	5.5	6.5	6.5	6.2

2.8 VIEW 3 - FRONT PARK LOOKING NORTHWEST

Recreational users have this view of the NYGCIP looking northwest from the terrace of Front Park. The park's manicured plant beds are in the foreground while a mass of evergreens dot the middleground. Ramp A in the background is partially obscured by the evergreens.

Vividness: The view is dominated by the mass of evergreens in the middleground and manicured hedge in the foreground. These elements are typical and provide little to the visual distinctiveness of the landscape which makes it unmemorable. The vividness rating is moderate/average.

Figure 18: View 3 - Front Park Looking Northwest

Intactness: While the landscaping is intact, the man-made features of Ramp A and the chain-link fence subtract from the natural environment. The visual integrity is provided by the longitudinal patterns of the hedge, evergreen trees and Ramp A. The intactness rating is moderate/average.

Unity: The forms of the hedge, evergreens and Ramp A combine to form a cohesive visual pattern between the man-made and natural features. However, the mass of evergreens obscures the background that subtracts from overall unity of the viewshed. The unity rating is moderately high.

Table 6: View 3 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 3 - Front Park Looking Northwest	4.0	3.5	4.5	4.0

2.9 VIEW 4 - FRONT PARK LOOKING EAST

Recreational users have this view of Front Park looking east from the park's terrace. The terrace's pavement dominates the foreground while the park's open lawn is in the middleground. Minor trees dot the open lawn area while the City's Propect Hill Historic District is visible in the background. Vehicular access to the Plaza within the park is also visible in the background.

Figure 19: View 4 - Front Park Looking East

Vividness: The view is dominated by the pavement of the terrace in the foreground and the open lawn of the middleground which contain no unique or memorable elements. The minor trees in the middleground and the landscaping off in the distance is typical and is not visually striking. The vividness rating is low.

Intactness: There is a strong visual order with the pavement in the foreground, open lawn in the middleground and the landscaping in the background. The minor trees and Plaza access does little to subtract from this order. Minimal man-made features dot the landscape providing a more naturalized viewshed. The intactness rating is high.

Unity: The linear forms of the pavement, open lawn and landscaping in the background create a cohesive visual pattern between the man-made and natural features. However, the contrasting colors and textures between the pavement and landscaping provides no integration of the man-made development with the natural setting. The unity rating is moderate/average.

Table 7: View 4 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 4 - Front Park Looking East	1.5	6.0	4.0	3.8

2.10 VIEW 5 - BUSTI AVENUE LOOKING WEST

Local residents have this view of Front Park from Busti Avenue looking west. Busit Avenue is in the foreground while the park's open lawn and the Plaza's access drive is in the middleground. Lake Erie in the background is obscured by the natural vegetation and the plaza off to the right. Lawn and pavement dominate the view.

Figure 20: View 5 - Busti Avenue Looking West

Vividness: The view is dominated by Busti Avenue and the park's open lawn which contain no unique or memorable elements. The striking view of Lake Erie is obscured by the vegetation and plaza subtracting from the water's relation to the landscape. The vividness rating is low.

Intactness: There is a strong visual order with the pavement in the foreground, open lawn in the middleground and the landscaping in the background. The minor trees and plaza access does little to subtract from this order. Few man-made features dot the landscape providing a more naturalized viewshed. The intactness rating is moderately high.

Unity: The linear forms of the pavement, open lawn and landscaping in the background create a cohesive visual pattern between the man-made and natural features. The contrasting colors and textures between the pavement and landscaping provides no integration of the man-made development with the natural setting. There is no strong connection to the water. The unity rating is moderately low.

Table 8: View 5 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 5 - Busti Avenue Looking West	2.0	5.0	3.5	3.5

2.11 View 6 - Vermont Street

LOOKING SOUTHWEST

Figure 21: View 6 - Vermont Street Looking Southwest

Local residents and business employees have this view of the NYGCIP from Vermont Street looking southwest. The viewpoint is located midway between Busti Avenue and Columbus Parkway. Single family, two-story residences line the street to the south while a newly planted green area is located to the north. The Plaza's employee entrance and facility is visible in the background obscuring the view to Canada. Numerous utility wires and poles dot the landscape with mature and young trees lining the street.

Vividness: The lining of street trees manipulate the view focusing on the plaza's gated entrance and facility which is not unique or memorable. Man-made elements are scattered throughout the view providing too many contrasting elements. The vividness rating is low.

Intactness: The two story residences with the street trees present a fairly intact view of an urban residential street. The varying architectural styles, materials, colors and textures is typical for this type of neighborhood. Utility poles and overhead wires encroach on the residential street image. The intactness rating is low.

Unity: Street details, including pavement, sidewalks, planting area and lawn, are well defined and maintained. The utility poles and overhead wires degrade the overall harmony of the view. The unity rating is low.

Table 9: View 6 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 6 - Vermont Street Looking Southwest	1.5	2.5	2.5	2.2

2.12 VIEW 7 - SHORELINE TRAIL LOOKING SOUTH

Local residents, and recreational users have this view of the NYGCIP traveling south along the Shoreline Trail. The view is dominated by the structural elements and roadway utilities of Ramp S, with views of the Plaza to the east and Lake Erie to the west. Black Rock Canal is partially visible to the west.

Figure 22: View 7 - Shoreline Trail Looking South

Vividness: The open view of Lake Erie provides a unique element and draws the attention away from the roadway's elements. The vegetation and water provides some color and texture to the viewshed. The vividness rating is high.

Intactness: The vegetation along the Shoreline Trail obscures the visual connection to the distant water of Lake Erie, and the roadway's pavement and water present conflicting landscape characters. The lack of maintenance along the Shoreline Trail degrades the visual integrity of the landscape. The intactness rating is moderately low.

Unity: The lack of a visual connection between the water and the roadways creates little harmony between the man-made and natural elements. The linear wall and the vegetation screen do little to integrate the man-made features with the landscape. The unity rating is moderately low.

Table 10: View 7 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 7 - Shoreline Trail Looking South	5.5	3.5	2.5	3.8

2.13 VIEW 8 - SOUTHBOUND I-190

LOOKING SOUTH

Local residents, business employees, and commuters have this view of the NYGCIP traveling southbound on I-190. The view is dominated by the highway, with views of the roadside vegetation and pedestrian bridge to the east and vegetaion to the west. Highway utilities, including roadway signage and lighting dot the landscape.

Vividness: The highway pavement with vegetation to the east and west is not unusual making this view unmemorable. Man-made elements are scattered throughout the view providing too many contrasting elements. The vividness rating is low.

Figure 23: View 8 - I-190 Southbound Looking South

Intactness: The trees and shrubs along the east partially screen views of Ramp S and the pedestrian bridge. However, the highway disrupts the connection between the natural setting to the west and the one to the east, thus creating conflicting landscape characters. The intactness rating is low.

Unity: Minimal vegetation with the highway in the middle degrades the natural setting creating little harmony between the man-made and natural elements. The vegetation and highway's contrasting colors and textures provide little integration of the man-made elements with its surrounding landscape. The unity rating is moderately low.

Table 11: View 8 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 8 - Sourthbound I-190 Looking South	2.5	2.5	2.5	2.5

2.14 VIEW 9 - SHORELINE TRAIL LOOKING NORTH

Recreational users have this view of the NYGCIP from the Shoreline Trail traveling north. The view is dominated by vegetation in the foreground. The linear path focuses the viewshed towards the Peace Bridge in the background. The Niagara River is slightly visible off to the west while the underpass of the Shoreline Trail and the I-190 above is visible to the east.

Vividness: The view along the Shoreline Trail presents an attractive view of the Peace Bridge in the distance. In addition, the overgrown vegetation in the foreground and middleground provides varying texture and color making the view memorable. The vividness rating is high.

Figure 24: View 9 - Shoreline Trail Looking North

Intactness: The Peace Bridge structure encroaches on the mainly natural landscape within the viewshed drawing one's focus away from the landscape and onto the man-made structure. The chain-link fence within the vegetation competes with the natural form, colors and texture of the landscape. The intactness rating is low.

Unity: Except for the bridge in the background, the natural vegetaion blends with the man-made structures of the I-190 underpass and chain-link fence. The curve at the end of the Shoreline Trail ties the man-made structure with the surrounding landscape creating a unity between the natural and man-made elements. The unity rating is moderately high.

Table 12: View 9 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 9 - Shoreline Trail Looking North	6.5	2.5	4.5	4.5

2.15 View 10 - Porter Avenue Looking Northeast

Figure 25: View 10 - Porter Avenue Looking Northeast

Local residents, business employees, travelers and recreational users have this view of the NYGCIP traveling northeast on Porter Avenue. Porter Avenue drops off in the middleground and rises in the background. The wide span of pavement dominates the view while the street trees and vegetation within Front Park, in the middleground, frames the viewshed. Commercial buildings are visible in the background off to the south.

Vividness: The foreground and middleground views are dominated by Porter Avenue and roadside elements, including street trees, which are typical and unmemorable. The commercial buildings in the background are partially obscured by the vegetation. The vividness rating is low.

Intactness: Porter Avenue and its street trees provides visual continuity from foreground to the background. Porter Avenue's roadside elements, such as the brick edging, sidewalks, street trees and maintained lawn areas provide visual order. The intactness rating is moderate/average.

Unity: The colors, textures and patterns of the roadside elements unify the man-made elements. The addition of the natural landscape creates a coherent visual pattern. The unity rating is moderately high.

Table 13: View 10 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 10 - Porter Avenue Looking Northeast	2.5	4.0	5.0	3.8

2.16 VIEW 11 - D'YOUVILLE COLLEGE ATHLETIC FIELDS LOOKING NORTH

Local residents and recreational users have this view of the NYGCIP from D'Youville College's athletic fields looking north. The college's open fields dominate the foreground while Porter Avenue is visible in the middleground. Ramp P is partially obstructed in the background.

Figure 26: View 11 - D'Youville College Athletic Fields Looking North

Vividness: The open lawn in the foreground dominates the view and does not contain any unique or memorable elements. Porter Avenue in the middleground, with its utility and streetscape elements are typical and unmemorable. The vividness rating is low.

Intactness: Except for Ramp P in the background, the wooded middleground and background is mainly intact. In addition, Porter Avenue does little to disrupt the visual relationship between the open lawn and wooded background. The utility and streetscape vertical elements partially disrupts the natural setting of the viewshed. The intactness rating is moderately high.

Unity: The wooded areas in the background are somewhat visually integrated with the open lawn in the foreground, providing a predominantly natural environment. The minimal utility poles with overhead wires and street lights does little to visually disrupt the viewshed. The unity rating is moderate/average.

Table 14: View 11 - Existing Visual Quality Evaluation Summary.

View	Vividness	Intactness	Unity	Visual Quality
View 11 - D'Youville College Athletic Fields Looking North	2.5	4.5	3.5	3.5

3 VIEWER GROUPS

Visual impact is the combination of the effect on the visual quality of the landscape and the perceived viewer's sensitivity. Sensitivity depends on the number and type of viewers and understanding the viewers exposure, activity and awareness. Based on these factors, viewers can be placed into similar groups. The viewer groups within the study area are separated into four (4) categories:

- Local Residents: People living in and around the project area;
- Business Employees: People working in and around the project area;
- Travelers / Commuters: People traveling through the project area; and
- Recreational Users: People involved in outdoor activities in and around the project area.

The following factors that modify perception are used to determine the viewer group's sensitivity:

- Proximity to the visual resource;
- Number of viewers;
- Frequency and duration of views;
- Viewer's activity; and,
- Viewer's awareness.

The following describes the viewer groups and the predicted viewer response based on their physical factors.

3.1 LOCAL RESIDENTS

Residents may view the NYGCIP from their homes, front and back yards, and local roads. Except when involved in local travel, these viewers are likely to be stationary, and from certain locations will have frequent and prolonged views of the NYGCIP. Local residents may view from ground level or elevated vantage points and from foreground or background distances. However, the opportunities for such views are limited by the general orientation of residential structures toward the adjacent street, screening provided by other buildings, fences and trees, and their distance from the project area. Residents know the local landscape and are likely to be sensitive to changes to particular views that are important to them. Therefore, residents' sensitivity to visual quality is high due to their close proximity, long duration and frequent exposure, and their familiarity to the area's visual environment.

3.2 BUSINESS EMPLOYEES

These individuals work at local businesses, with the greatest concentration of employees located in the City of Buffalo, primarily within commercial and industrial districts downtown. Except while traveling to and from their places of employment, their views of the project area are generally limited due to their focus on work activities. Limited views tend to be quick glances towards the outside with the NYGCIP in the middle and background. In some instances, offices with views toward the NYGCIP may have the opportunity for prolonged views and will be aware of changes to the visual important. Therefore, business employees' sensitivity to the visual quality is high to moderate due to their limited views, short duration and frequency, and their familiarity to the area's visual environment.

3.3 TRAVELERS / COMMUTERS

This group includes motorists that would view the NYGCIP using the transportation corridors including entering the United States from the Peace Bridge, Interstate I-190 and the local streets adjacent to the Plaza. Highway motorists would view the area while traveling at high speeds in short durations in relatively narrow visual fields, as their primary focus will be on the highway traffic and signage. Travelers, being destination-oriented, their sensitivity to visual quality and changes in the local visual environment is low. Commuters, while similar to travelers, make frequent repeat trips and develop a sense of identity with landmarks within the visual environment. Therefore, travelers/commuters' sensitivity to visual quality is moderate to low due to their limited and short views of the project area.

3.4 RECREATIONAL USERS

This group generally includes local residents and visitors involved in outdoor recreational activities on Lake Erie, Niagara River, Black Rock Canal, Front Park, LaSalle Park, the Shoreline Trail, and at other recreational facilities. Like residents, recreationists have opportunities for prolonged continuous views which affords them to focus on the project area, appreciate it in the context of its surrounding landscape, and therefore are highly sensitive to the visual environment. Recreational users' sensitivity to visual quality is high due to their close proximity, long duration and frequent exposure, and their sensitivity to the area's visual environment.